

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA18 | Stoneleigh, Kenilworth and Burton Green

Baseline (SV-002-018)

Sound, noise and vibration

November 2013

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Department
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Appendix SV-002-018

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1 Introduction

1.1 Structure of the sound, noise and vibration appendices

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas.
- 1.1.2 For the Stoneleigh, Kenilworth and Burton Green area (CFA18), the other three sections are as follows:
- baseline sound, noise and vibration (Appendix SV-002-018) (this appendix);
 - construction sound, noise and vibration (Appendix SV-003-018); and
 - operational sound, noise and vibration (Appendix SV-004-018).
- 1.1.3 Maps referred to throughout the sound, noise and vibration appendices are contained in the Volume 5 map book.
- 1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.

1.2 Existing acoustic environment

- 1.2.1 The study area is predominantly arable farm land interspersed with pastures, parkland landscapes, golf courses and recreational open space. Most of the principal roads through the study area, namely the A46 (Kenilworth By Pass), A445 (Leamington Road), B4115 and A429 (Coventry Road/Kenilworth Road), run in a south-west to north-east direction, with small rural roads connecting Stoneleigh with Gibbet Hill and Coventry, and Burton Green with Kenilworth. Away from these main transportation noise sources the sound climate is one of local road traffic, agricultural activities, and natural sound sources.
- 1.2.2 In the residential area of Burton Green the noise climate is dominated by local road traffic on Cromwell Road and aircraft passing overhead. When local traffic is subdued, natural sound sources dominate the soundscape. Daytime noise levels in this area are typically 60 to 65dB¹, reducing to 50dB² at night. In the more agricultural areas south-east of Burton Green distant road traffic noise from the A429 (Kenilworth Road) dominates the sound climate, with the sporadic contribution from aircraft flying overhead. At properties away from main roads, daytime levels are typically 55 to 60dB¹ and night-time levels 50dB².
- 1.2.3 In Crackley, on the northern edge of Kenilworth, the noise climate is characterised by nearby transportation sources, namely road traffic noise from the A429 (Coventry Road) and occasional local traffic on Woodland Road, Highland Road and Inchbrook Road. The Coventry to Leamington Spa Line also crosses through the area running

¹ 16-hour daytime (07:00 to 23:00) equivalent continuous sound pressure level, $L_{pAeq,16hr}$.

² 8-hour night-time (23:00 to 07:00) equivalent continuous sound pressure level, $L_{pAeq,8hr}$.

south and parallel to the A429 (Coventry Road), between the eastern edge of Kenilworth and Coventry. In the surrounding area adjacent to the line short duration noise events from the passage of railway vehicles is a regular occurrence. In areas along the A429 daytime noise levels are typically 60 to 65dB, and range from 50 to 55 at night-time². At the eastern edges of the residential area, towards the farmland, typical daytime noise levels are 50dB¹, reducing to 45dB at night. A similar noise climate is present in the nearby rural residential area of Gibbet Hill and Cryfield Grange, on the south-western edge of Coventry, approximately 1.2km from Crackley.

- 1.2.4 The rural area comprised between Stoneleigh and Coventry is traversed by the A46 (Kenilworth By Pass) in a south-west to north-east direction. The noise climate is dominated by continuous road traffic noise from the A46 as well as road noise from Stoneleigh Road in Stareton, and Dalehouse Lane and Crew Lane in Kenilworth during both day and night-time periods. Noise levels in this area are typically 60 to 65dB during daytime, reducing to 50 to 55dB at night-time. Away from the main roads, the soundscape is characterised by natural sound sources (e.g. tree rustle, bird song), agricultural noise and sporadic aircraft noise.
- 1.2.5 The areas comprised between Stoneleigh and the A445 (Leamington Road) are predominantly agricultural. Ambient noise is dominated by natural sound sources, with contributions from local road traffic from the B4113 (Stoneleigh Road) and the B4115. Within the village of Stoneleigh, typical noise levels range between 50 and 55dB during the day and between 45 and 50dB at night-time. Near the main roads and in the proximity of Stoneleigh Park Industrial Estate, daytime noise levels are typically 60dB, reducing to 45 to 50dB at night. In the rural, quieter areas away from major road, the noise levels drop significantly during the night.

2 Scope, assumptions and limitations

2.1 Sound and vibration sensitive receptors

2.1.1 Within the Stoneleigh, Kenilworth and Burton Green CFA, 161 assessment locations have been defined to represent all sound and vibration sensitive receptors within the spatial scope. The assessment locations are shown on the detailed maps in Map Series SV-03 and SV-04. Within this area, the following types of sound and vibration sensitive receptors have been identified:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship;
- hotels; and
- offices.

2.2 Local engagement

2.2.1 Discussions have been held with representatives of Warwick District Council regarding the approach which has been taken to baseline monitoring within this area, the identification of noise and vibration sensitive receptors and the selection of assessment locations.

2.2.2 Changes suggested during these meetings have influenced the assessment locations used and the monitoring undertaken and reported in this appendix.

2.2.3 Representatives of Warwick District Council have also attended baseline sound measurements in this area and witnessed the measurement procedures used.

2.2.4 Local engagement through community forum meetings has also provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and influenced the monitoring undertaken and reported in this document.

2.3 Existing baseline sound monitoring locations

2.3.1 Baseline monitoring locations have been defined in order to provide representative sound levels at each assessment location within the study area.

2.3.2 Baseline information has been gathered incrementally through successive rounds of field surveys focused on locations where likely significant effects are forecast.

2.3.3 Areas within the study area where baseline data is required have been broken down into a series of smaller sub-areas. Each of these is representative of clusters of receptors where the noise climate is influenced by the same sound sources. Within each of the sub-areas, a programme of unattended monitoring has been undertaken, supplemented by attended measurements to ensure good coverage at all the identified sound assessment locations. All attended measurements have been

undertaken simultaneously with the unattended measurements to allow a direct comparison between assessment locations to be established.

- 2.3.4 After each successive round of field surveys, the collected data has been analysed, and based upon feedback from on-going stakeholder dialogue, the measurement locations refined for subsequent rounds.
- 2.3.5 Maps showing the baseline sound monitoring locations and assessment locations with this area are included in Map Series SV-03 and SV-04 (Volume 5 CFA18 map book).

3 Environmental baseline

3.1 Existing baseline data collection methodology

- 3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Appendix SV-001-000.
- 3.1.2 Over the Stoneleigh, Kenilworth and Burton Green area, a number of baseline sound measurements have been undertaken. These have been classified as follows:
- fourteen long-term measurements – unattended measurements of several days duration; and
 - thirty short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).
- 3.1.3 The following paragraphs (3.1.4 to 3.1.9) describe a select number of the total number of baseline measurement locations where baseline measurements were undertaken
- 3.1.4 In the village of Burton Green, a continuous long-term measurement was taken in the residential area on Cromwell Road. This long-term measurement was supplemented with a series of satellite measurements during both day and night time periods at surrounding residential receptors located on Hob Lane, Cromwell Lane and Red Lane. An additional long-term noise monitoring position was located on Hodgett's Lane and simultaneous satellite noise measurements were undertaken at further noise sensitive receptors on Cromwell Road.
- 3.1.5 In the agricultural areas between Burton Green and Crackley there are a number of isolated properties. To investigate the noise climate at these isolated receptors, further long-term monitoring sites were located near Long Meadow Farm off Hob Lane and at Crackley Farm, south of Crackley Wood, while simultaneous short-term measurements were carried out on Crackley Lane, Hob Lane and Red Lane. All satellite measurements were undertaken simultaneously with the longer duration monitoring to allow good correlation between the two locations, with each site being visited several times during both day and night-time periods.
- 3.1.6 In the residential areas on the northern edge of Kenilworth, close to the Proposed Scheme, seven day unattended baseline sound monitoring has been undertaken at several locations within Crackley, with further short-term measurements undertaken simultaneously. Long-term monitoring positions were located off Woodland Road and at Crackley Crescent. For both, a series of short-term measurements representative of the noise sensitive receptors in the surrounding residential areas were made, namely on Coventry Road and Woodland Road. Additional long and short-term monitoring positions were set up in Crackley, in order to assess the noise climate in the residential areas surrounding the Common Lane Industrial Estate. Long-term noise monitoring was carried out on farmland off Highland Road and Inchbrook Road, while simultaneous short-term measurements were undertaken on Best Avenue and Frythe Close.
- 3.1.7 In the residential area of Gibbet Hill and Cryfield Grange, at the southern edge of Coventry, the noise climate is characterised by the presence of two main

transportation noise sources, namely the A429 (Kenilworth Road) and the Coventry to Leamington Spa railway line. Away from these noise sources, the baseline sound climate varies significantly. Long-term noise monitoring was undertaken in residential areas adjacent to the rail line as well as on agricultural land off Cryfield Grange Road. Simultaneous short-term satellite measurement positions were located at noise sensitive receptors on Inchbrook Road, Cracley Crescent and Stoneleigh Road. All satellite monitoring locations were visited at different times of the day and night-time periods.

- 3.1.8 In the agricultural area of north east of Kenilworth, located between the A46 (Kenilworth By Pass) and the railway line, there are a number of isolated properties in a rural setting. To assess the noise climate at these residential receptors, one long-term monitoring position was located in the vicinity of Dalehouse Lane. Satellite short-term measurements were taken simultaneously at noise sensitive properties on Stoneleigh Road and Crew Lane.
- 3.1.9 In Stoneleigh, seven day unattended baseline sound monitoring has been undertaken near Park Farm, with further short-term measurements undertaken simultaneously. Short-term monitoring positions were located on Stoneleigh Road near the East Gate to Stoneleigh Park as well as at noise sensitive properties on Vicarage Road and Hall Close. Additional long-term noise monitoring was carried out in the vicinity of Furzon Hill Cottages, along the A445 (Leicester Lane) and supplemented by day and night-time short-term measurements at noise sensitive receptors located along Coventry Road.

3.2 Existing baseline sound levels

- 3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:
- Baseline levels used for the operational sound assessment:
 - $L_{pAeq,16hr\text{ weekday}}$ daytime (07:00-23:00) sound pressure level;
 - $L_{pAeq,8hr\text{ weekday}}$ night-time (23:00-07:00) sound pressure level;
 - arithmetic average of $L_{pAFmax,5min}$ night-time sound pressure level; and
 - highest $L_{pAFmax,5min}$ night-time sound pressure level.
 - Baseline levels used for the construction sound assessment:
 - daytime L_{pAeq} sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
 - evening/weekend L_{pAeq} sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00-23:00; Sunday 07:00 to 23:00); and
 - night-time L_{pAeq} sound pressure level (Monday to Sunday 23:00-07:00).
- 3.2.2 These values are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have

been derived. This coding is summarised in Table 2 and explained in detail in Appendix SV-001-000.

Appendix SV-002-018 | Environmental baseline

Table 1: Existing baseline sound levels

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
192269	Fennyland Lane, Kenilworth	CN024L	46.4	36.6	41.0	69.5	46.2	46.4	38.1	1,C,ii,c
192312	Arborfields Close, Kenilworth	CN103S	47.2	35.2	48.6	61.2	48.6	45.7	37.2	2,C,i,c
192456	Laneham Place, Kenilworth	CN103S	62.2	50.2	66.6	79.2	63.6	60.7	52.2	2,B,ii,c
192623	Red Lane, Burton Green, Kenilworth	CN174S	53.7	52.0	69.1	70.0	56.3	51.9	52.5	2,C,i,c
192740	Red Lane, Burton Green, Kenilworth	CN174S	60.7	59.0	73.1	74.0	63.3	58.9	59.5	2,C,i,c
192801	Red Lane, Burton Green, Kenilworth	CN174S	60.7	59.0	73.1	74.0	63.3	58.9	59.5	2,C,i,c
192994	Red Lane, Burton Green, Kenilworth	CN174S	60.7	59.0	73.1	74.0	63.3	58.9	59.5	2,C,i,c
193519	Crackley Lane, Kenilworth	CN050S	45.3	42.2	52.2	65.0	45.7	46.2	43.4	2,C,ii,c
193528	Crackley Lane, Kenilworth	CN050S	50.3	47.2	57.2	70.0	50.7	51.2	48.4	2,C,i,c
193583	Hollis Lane, Kenilworth	CN050S	48.3	45.2	55.2	68.0	48.7	49.2	46.4	2,C,i,c
193618	Hollis Lane, Kenilworth	CN050S	40.3	37.2	47.2	60.0	40.7	41.2	38.4	2,C,ii,c
196840	Crackley Crescent, Kenilworth	CN103S	62.2	50.2	66.6	79.2	63.6	60.7	52.2	2,B,ii,c
196895	Crackley Crescent, Kenilworth	CN067L	60.1	52.4	64.2	79.8	60.7	59.1	52.5	1,A,i,b
196951	Coventry Road, Kenilworth	CN103S	56.2	44.2	57.6	70.2	57.6	54.7	46.2	2,C,i,c
197068	Coventry Road, Kenilworth	CN176S	52.1	43.9	65.3	69.0	52.8	51.1	44.0	2,BC,ii,c
197103	Coventry Road, Kenilworth	CN103S	56.2	44.2	57.6	70.2	57.6	54.7	46.2	2,C,i,c
197201	Crackley Lane, Kenilworth	CN023L	41.3	35.1	42.0	64.6	43.3	42.5	36.3	1,A,i,c

³ Error! Reference source not found. provides a data source coding key.

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
197360	Crackley Hill, Coventry Road, Kenilworth	CN176S	52.1	43.9	65.3	69.0	52.8	51.1	44.0	2,BC,i,c
197431	Crackley Hill, Coventry Road, Kenilworth	CN176S	52.1	43.9	65.3	69.0	52.8	51.1	44.0	2,BC,i,c
197505	Woodland Road, Kenilworth	CN177S	54.5	45.0	61.8	74.0	55.1	53.5	45.1	2,C,ii,c
197545	Woodland Road, Kenilworth	CN177S	54.5	45.0	61.8	74.0	55.1	53.5	45.1	2,C,ii,c
197585	Woodland Road, Kenilworth	CN177S	46.5	37.0	54.8	67.0	47.1	45.5	37.1	2,BC,ii,c
197625	Woodland Road, Kenilworth	CN054S	59.1	54.0	62.1	69.3	58.6	59.1	55.4	2,C,i,c
197735	Woodland Road, Kenilworth	CN177S	51.5	42.0	55.8	68.0	52.1	50.5	42.1	2,C,ii,c
197879	Common Lane, Kenilworth	CN054S	51.1	46.0	59.1	66.3	50.6	51.1	47.4	2,BC,ii,c
198097	Moss Grove, Kenilworth	CN054S	59.1	54.0	62.1	69.3	58.6	59.1	55.4	2,C,i,c
198215	Crackley Lane, Kenilworth	CN023L	41.3	35.1	42.0	64.6	43.3	42.5	36.3	1,A,ii,c
198730	Cryfield Grange Road, Kenilworth	CN052S	43.4	35.5	46.1	51.8	44.9	44.2	36.6	2,BC,ii,c
198773	Cryfield Grange Road, Kenilworth	CN052S	43.4	35.5	46.1	51.8	44.9	44.2	36.6	2,BC,i,c
199042	Redthorne Grove, Kenilworth	CN103S	47.2	35.2	48.6	61.2	48.6	45.7	37.2	2,C,i,c
200460	Westwood Heath Road, Coventry	CN048S	47.6	33.9	43.9	63.9	48.8	59.7	35.1	2,BC,ii,b
202456	Hob Lane, Balsall Common, Coventry	WM9910	45.9	41.5	48.7	89.4	47.4	44.2	41.9	1,A,i,a
202746	Waste Lane, Balsall Common, Coventry	WM1003	51.8	39.0	61.8	67.8	53.6	53.7	40.5	2,A,ii,b
202851	Waste Lane, Balsall Common, Coventry	WM1003	51.8	39.0	61.8	67.8	53.6	53.7	40.5	2,A,ii,b
202900	Waste Lane, Balsall Common, Coventry	WM1002	46.9	34.4	49.7	53.0	48.7	48.8	35.9	2,A,ii,b
202921	Waste Lane, Balsall Common, Coventry	WM1003	51.8	39.0	61.8	67.8	53.6	53.7	40.5	2,A,ii,b

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Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
203166	Waste Lane, Balsall Common, Coventry	WM1003	51.8	39.0	61.8	67.8	53.6	53.7	40.5	2,A,ii,b
204079	Hodgetts Lane, Burton Green, Kenilworth	CN063L	50.4	47.7	49.5	77.7	51.5	48.3	47.5	1,A,i,c
204103	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
204138	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	59.9	50.1	41.5	1,BC,i,c
204193	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
204223	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
204255	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
204406	Hob Lane, Burton Green, Kenilworth	CN049S	53.0	43.9	53.9	66.9	54.2	65.2	45.1	2,C,i,c
204480	Hob Lane, Burton Green, Kenilworth	CN064L	51.1	49.4	51.2	78.6	54.0	49.3	52.3	1,A,i,c
204571	Hob Lane, Burton Green, Kenilworth	CN172S	43.5	36.7	41.2	47.0	46.4	41.7	37.1	2,C,i,c
204647	Red Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
204672	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
204827	Waste Lane, Balsall Common, Coventry	WM1002	46.9	34.4	49.7	53.0	48.7	48.8	35.9	2,A,ii,b
204847	Waste Lane, Balsall Common, Coventry	WM1002	46.9	34.4	49.7	53.0	48.7	48.8	35.9	2,A,ii,b
204916	Hodgetts Lane, Burton Green	CN063L	47.4	44.7	49.5	77.7	48.5	45.3	44.5	1,A,ii,c
204998	Hodgetts Lane, Burton Green, Kenilworth	CN063L	49.4	46.7	49.5	77.7	50.5	47.3	46.5	1,A,i,c
205051	Hodgetts Lane, Burton Green, Kenilworth	CN063L	49.4	46.7	49.5	77.7	50.5	47.3	46.5	1,A,i,c
205107	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
205176	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	59.9	50.1	41.5	1,BC,i,c

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
205188	Hodgetts Lane, Burton Green, Kenilworth	CN063L	49.4	46.7	49.5	77.7	50.5	47.3	46.5	1,A,i,c
205246	Cromwell Lane, Burton Green, Kenilworth	CN022L	49.7	43.4	51.3	74.3	55.9	46.1	41.5	1,C,i,c
205259	Hodgetts Lane, Burton Green, Kenilworth	CN063L	49.4	46.7	49.5	77.7	50.5	47.3	46.5	1,A,i,c
205270	Hodgetts Lane, Berkswell, Coventry	WM1002	46.9	34.4	49.7	53.0	48.7	48.8	35.9	2,A,ii,b
205274	Nailcote Lane, Berkswell, Coventry	WM1005	62.4	43.0	55.7	74.5	64.1	64.2	44.4	2,A,ii,b
206065	Nailcote Lane, Berkswell, Coventry	WM1105	65.9	55.5	78.9	80.5	67.7	64.7	57.1	2,A,ii,b
206156	Nailcote Lane, Berkswell, Coventry	WM1104	63.9	56.4	79.2	81.0	65.6	62.7	57.9	2,A,ii,b
206363	Bockendon Road, Coventry	CN173S	41.4	39.7	41.4	49.0	44.2	39.5	40.2	2,C,ii,c
206371	Crackley Lane, Kenilworth	CN173S	53.4	51.7	56.4	64.0	56.2	51.5	52.2	2,B,i,c
206392	Red Lane, Burton Green, Kenilworth	CN051S	56.2	44.9	54.9	67.9	57.4	68.4	46.1	2,C,i,c
206457	Red Lane, Burton Green, Kenilworth	CN051S	52.2	40.9	50.9	63.9	53.4	64.4	42.1	2,C,i,c
206515	Red Lane, Burton Green, Kenilworth	CN051S	56.2	44.9	54.9	67.9	57.4	68.4	46.1	2,C,i,c
206561	Red Lane, Burton Green, Kenilworth	CN051S	56.2	44.9	54.9	67.9	57.4	68.4	46.1	2,C,i,c
207279	Cromwell Lane, Coventry	CN048S	55.6	36.9	48.9	68.9	56.8	67.7	38.1	2,BC,i,b
207331	Cromwell Lane, Burton Green, Kenilworth	CN048S	57.6	38.9	48.9	68.9	58.8	69.7	40.1	2,BC,i,b
207393	Cromwell Lane, Coventry	CN048S	57.6	38.9	48.9	68.9	58.8	69.7	40.1	2,BC,i,b
207631	Cromwell Lane, Coventry	CN048S	57.6	38.9	48.9	68.9	58.8	69.7	40.1	2,BC,i,b
207990	Cromwell Lane, Burton Green, Kenilworth	CN022L	46.7	40.4	51.3	74.3	55.9	46.1	41.5	1,BC,i,c
208148	Cromwell Lane, Burton Green, Kenilworth	CN171S	60.0	47.6	-	58.0	61.1	57.9	72.2	2,BC,i,c

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Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
208215	Cromwell Lane, Burton Green, Kenilworth	CN048S	55.6	36.9	48.9	68.9	56.8	67.7	38.1	2,BC,i,b
209053	Crackley Lane, Kenilworth	CN050S	48.3	45.2	55.2	68.0	48.7	49.2	46.4	2,C,i,c
216835	Stoneleigh Road, Coventry	CN053S	58.4	54.9	72.2	75.0	59.6	70.6	56.2	2,BC,i,c
216902	Leicester Lane, Cubbington, Leamington Spa	CN027L	64.8	56.4	72.4	87.1	65.5	62.0	56.6	1,C,i,c
216927	Kenilworth Road, Coventry	CN066L	58.6	54.7	60.3	98.5	58.5	59.7	57.0	1,BC,ii,b
217392	Kenilworth Road, Coventry	CN066L	63.6	59.7	60.3	98.5	63.5	64.7	62.0	1,C,ii,b
217535	Fairway Rise, Kenilworth	CN025L	47.4	38.1	49.5	69.1	47.8	45.2	38.1	1,C,ii,c
217784	Grovehurst Park, Kenilworth	CN109S	54.8	45.2	60.1	68.4	56.0	50.9	45.5	2,BC,ii,c
217994	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN109S	49.8	40.2	58.1	66.4	51.0	45.9	40.5	2,BC,ii,c
218196	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN026L	42.4	30.7	37.5	61.4	39.8	34.5	31.2	1,C,ii,c
218483	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN069L	48.8	43.9	49.6	74.0	49.1	48.6	44.2	1,A,i,b
218718	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN069L	46.8	41.9	51.6	76.0	47.1	46.6	45.8	1,BC,ii,b
218885	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN026L	42.4	30.7	42.5	66.4	39.8	34.5	31.2	1,BC,ii,c
219016	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN109S	53.8	44.2	58.1	66.4	55.0	49.9	44.5	2,BC,i,c
219122	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN026L	43.4	31.7	39.5	63.4	40.8	35.5	32.2	1,BC,ii,c

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
219394	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN109S	49.8	40.2	58.1	66.4	51.0	45.9	40.5	2,BC,ii,c
219703	Vicarage Road, Stoneleigh, Coventry	CN056S	48.2	39.3	49.8	66.0	47.1	42.2	38.9	2,B,ii,c
219791	Walkers Orchard, Stoneleigh, Coventry	CN056S	48.2	39.3	49.8	66.0	47.1	42.2	38.9	2,B,i,c
219942	Birmingham Road, Stoneleigh, Coventry	CN181S	55.0	46.4	60.0	68.0	55.4	54.8	46.7	2,BC,ii,c
220383	Leicester Lane, Cubbington, Leamington Spa	CN070L	44.6	41.2	49.7	75.0	46.4	42.8	41.1	1,B,ii,b
220450	Leicester Lane, Cubbington, Leamington Spa	CN027L	64.8	56.4	72.4	87.1	65.5	62.0	56.6	1,C,i,c
220565	Stareton, Kenilworth	CN026L	48.4	36.7	39.5	63.4	45.8	40.5	37.2	1,C,ii,c
220606	Stareton, Kenilworth	CN026L	52.4	40.7	47.5	71.4	49.8	44.5	41.2	1,A,i,c
220714	Abbey Park, Stareton, Kenilworth	CN026L	47.4	35.7	42.5	66.4	44.8	39.5	36.2	1,C,ii,c
221156	Church Lane, Stoneleigh, Coventry	CN182S	46.9	46.1	47.8	50.0	47.0	46.8	46.8	2,C,ii,c
221368	Coventry Road, Cubbington, Leamington Spa	CN057S	47.9	35.0	45.6	60.6	49.7	44.7	36.1	2,C,ii,c
222373	Crew Lane, Kenilworth	CN055S	50.0	43.4	53.2	75.5	50.6	48.0	43.4	2,BC,ii,c
222393	Dalehouse Lane, Kenilworth	CN025L	52.4	43.1	54.5	74.1	52.8	50.2	43.1	1,C,i,c
222401	Common Lane, Kenilworth	CN180S	49.3	44.1	50.0	61.0	51.0	48.1	47.0	2,A,i,c
223457	Frythe Close, Kenilworth	CN025L	42.4	33.1	47.5	67.1	42.8	40.2	33.1	1,BC,ii,c
223467	Dalehouse Lane Industrial Estate, Cotton Drive, Kenilworth	CN180S	49.3	44.1	50.0	61.0	51.0	48.1	47.0	2,A,i,c
223712	Lulworth Park, Kenilworth	CN180S	59.3	54.1	57.0	68.0	61.0	58.1	57.0	2,BC,ii,c
223946	Lulworth Park, Kenilworth	CN180S	59.3	54.1	57.0	68.0	61.0	58.1	57.0	2,BC,ii,c

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Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
225929	Milburn Grange, Coventry Road, Kenilworth	CN024L	51.4	41.6	46.0	74.5	51.2	51.4	43.1	1,A,i,c
225955	Millburn Grange, Coventry Road, Kenilworth	CN024L	51.4	41.6	46.0	74.5	51.2	51.4	43.1	1,A,i,c
226073	Dalehouse Lane, Kenilworth	CN025L	45.4	36.1	47.5	67.1	45.8	43.2	36.1	1,C,ii,c
226171	Inchbrook Road, Kenilworth	CN068L	48.0	43.6	54.6	76.1	50.0	46.8	44.5	1,B,ii,b
226203	Highland Road, Kenilworth	CN105S	45.9	34.6	45.8	55.0	47.3	44.4	41.5	2,A,i,b
226248	Highland Road, Kenilworth	CN024L	51.4	41.6	46.0	74.5	51.2	51.4	43.1	1,A,i,c
226301	Highland Road, Kenilworth	CN024L	51.4	41.6	46.0	74.5	51.2	51.4	43.1	1,A,i,c
226442	Highland Road, Kenilworth	CN105S	45.9	34.6	45.8	55.0	47.3	44.4	41.5	2,A,i,b
226501	Highland Road, Kenilworth	CN068L	48.0	43.6	54.6	76.1	50.0	46.8	44.5	1,B,ii,b
226630	Inchbrook Road, Kenilworth	CN068L	48.0	43.6	54.6	76.1	50.0	46.8	44.5	1,B,ii,b
226786	Inchbrook Road, Kenilworth	CN105S	45.9	34.6	45.8	55.0	47.3	44.4	41.5	2,A,i,b
226941	Highland Road, Kenilworth	CN105S	45.9	34.6	45.8	55.0	47.3	44.4	41.5	2,A,i,b
227153	Butler Close, Kenilworth	CN179S	54.6	39.5	51.4	56.0	56.2	53.4	40.3	2,C,i,c
227215	Whitehead Drive, Kenilworth	CN179S	49.6	34.5	47.4	52.0	51.2	48.4	35.3	2,B,ii,c
227238	Best Avenue, Kenilworth	CN179S	49.6	34.5	47.4	52.0	51.2	48.4	35.3	2,B,ii,c
227277	Garlick Drive, Kenilworth	CN180S	49.3	44.1	50.0	61.0	51.0	48.1	47.0	2,A,i,c
227360	Stoneleigh Road, Coventry	CN066L	55.6	51.7	54.3	92.5	72.5	73.7	74.2	2,A,i,c
227387	Beverly Drive, Coventry	CN066L	57.6	53.7	54.3	92.5	57.5	58.7	56.0	1,B,i,b
227431	Beverly Drive, Coventry	CN066L	57.6	53.7	54.3	92.5	57.5	58.7	56.0	1,B,i,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
227513	Kenilworth Road, Coventry	CNo66L	63.6	59.7	60.3	98.5	63.5	64.7	62.0	1,C,ii,b
227545	5 Beverly Drive, Coventry	CNo66L	62.6	58.7	59.3	97.5	62.5	63.7	61.0	1,BC,ii,b
228223	Cryfield Grange Road, Coventry	CNo52S	45.4	35.5	46.1	51.8	46.9	46.2	36.6	2,BC,ii,c
228321	Cryfield Grange Road, Coventry	CNo40L	46.5	39.9	47.2	62.3	47.9	45.0	41.9	1,A,i,c
228690	Beverly Drive, Coventry	CNo66L	54.6	50.7	51.3	89.5	54.5	55.7	53.0	1,BC,ii,c
228744	Kenilworth Road, Coventry	CNo66L	63.6	59.7	60.3	98.5	63.5	64.7	62.0	1,C,ii,b
228816	Stoneleigh Abbey, Kenilworth	CNo69L	47.8	42.9	47.6	72.0	48.1	47.6	43.2	1,C,ii,b
229009	Crew Lane, Kenilworth	CNo55S	60.0	53.4	63.2	85.5	60.6	58.0	53.4	2,B,i,c
229016	Crew Lane, Kenilworth	CNo55S	60.0	53.4	63.2	85.5	60.6	58.0	53.4	2,B,i,c
229071	Stoneleigh Road, Coventry	CNo25L	54.4	45.1	56.5	76.1	54.8	52.2	45.1	1,C,ii,c
229088	Dalehouse Lane, Kenilworth	CNo25L	52.4	43.1	54.5	74.1	52.8	50.2	43.1	1,C,ii,c
229176	Dalehouse Lane, Kenilworth	CNo55S	63.0	56.4	63.2	85.5	63.6	61.0	56.4	2,A,i,c
229186	Dalehouse Lane, Kenilworth	CNo25L	60.4	51.1	62.5	82.1	60.8	58.2	51.1	1,A,i,c
229212	Dalehouse Lane, Kenilworth	CNo25L	60.4	51.1	62.5	82.1	60.8	58.2	51.1	1,A,i,c
229259	Dalehouse Lane, Kenilworth	CNo25L	60.4	51.1	62.5	82.1	60.8	58.2	51.1	1,A,i,c
229478	Stoneleigh Road, Coventry	CNo66L	47.6	43.7	64.3	84.5	64.5	65.7	66.2	2,BC,ii,c
229767	Little Cryfield, Coventry	CNo52S	46.4	33.5	42.1	47.8	47.9	47.2	34.6	2,C,ii,c
229973	Motslow Hill, Stoneleigh, Coventry	CNo56S	48.2	39.3	49.8	66.0	47.1	42.2	38.9	2,B,i,c
230115	The Cunnery, Kenilworth	CNo69L	46.8	41.9	51.6	76.0	47.1	46.6	42.2	1,BC,ii,b

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Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ³
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/Weekend L _{pAeq}	Night-time L _{pAeq}	
701070	Cromwell Lane, Burton Green	CN022L	46.7	40.4	51.3	74.3	59.9	50.1	41.5	1,BC,ii,b
701071	Hob Lane, Burton Green	CN022L	46.7	40.4	51.3	74.3	59.9	50.1	41.5	1,BC,ii,b
701079	Stoneleigh Park, Kenilworth	CN026L	41.4	29.7	41.5	65.4	38.8	33.5	30.2	1,BC,iii,b
701072	Leicester Lane, Cubbington	CN027L	64.8	56.4	72.4	87.1	65.5	62.0	56.6	1,C,ii,b
701069	Waste Lane, Balsall Common, Coventry	WM1004	67.5	40.0	54.7	77.5	69.3	69.4	41.5	2,A,ii,b
700626	Hob Lane, Burton Green	CN049S	53.0	43.9	53.9	66.9	54.2	65.2	45.1	2,C,iii,c
700637	Crew Lane, Kenilworth	CN055S	50.0	43.4	53.2	75.5	50.6	48.0	43.4	2,BC,ii,c
701077	Stoneleigh Park, Kenilworth	CN109S	49.8	40.2	58.1	66.4	51.0	45.9	40.5	2,BC,ii,c
701078	Stoneleigh Park, Kenilworth	CN109S	49.8	40.2	58.1	66.4	51.0	45.9	40.5	2,BC,ii,c
700638	Princess Drive Industrial Estate, Crackley	CN176S	45.1	36.9	58.3	62.0	45.8	44.1	37.0	2,BC,iii,c
700639	Princess Drive Industrial Estate, Crackley	CN176S	47.1	38.9	60.3	64.0	47.8	46.1	39.0	2,BC,iii,c
701080	Vicarage Road, Stoneleigh	CN182S	46.9	46.1	47.8	50.0	47.0	46.8	46.8	2,C,ii,c
711027	Cryfield Grange Road, Kenilworth	CN023L	41.3	35.1	42.0	64.6	43.3	42.5	36.3	1,A,i,c
711028	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN055S	50.0	43.4	50.2	72.5	50.6	48.0	43.4	2,C,ii,c
711043	National Agricultural Centre, Stoneleigh Park, Kenilworth	CN109S	53.8	44.2	58.1	66.4	55.0	49.9	44.5	2,BC,i,c
721017	Leicester Lane, Cubbington, Leamington Spa	CN027L	64.8	56.4	72.4	87.1	65.5	62.0	56.6	1,C,i,c

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study ⁴ or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Defra noise maps ⁵ , etc.).
7	Generic levels
Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied.
Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.
Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

3.3 Future baseline methodology

Construction

- 3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.
- 3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.

⁴ Building Research Establishment, (2002), National Noise Incidence Study, 2000/2001.

⁵ Defra, Noise Mapping England, <http://services.defra.gov.uk/wps/portal/noise/>; accessed 26 July 2013.

- 3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

Operation

- 3.3.4 Changes in existing sound sources between 2012/2013 and 2026 may result in changes to baseline sound levels.
- 3.3.5 For major transportation sources, data for existing and future baseline operations have been reviewed. Where changes may occur between the existing baseline and future baseline (2026) situations, expected changes in baseline sound level have been derived. For example, expected changes in traffic flow, composition and speed have been used to calculate changes in sound emission from roads using the methodology from the Calculation of Road Traffic Noise⁶.
- 3.3.6 The changes to major sound sources which have been identified in this area are summarised in Table 3.

Table 3: 2026 future baseline changes in sound sources

Sound Source affected	Cause of change in levels	Change in sound levels (existing baseline to 2026 future baseline) (dB)	
		Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$
A429 Kenilworth Road	Increased traffic flow	0.8	0.6
Crackley Lane	Increased traffic flow	1.2	0.3
A445 Leicester Lane in the vicinity of Cubbington	Increased traffic flow	0.9	0.3
A445 Leicester Lane in the vicinity of Cubbington	Increased traffic flow	0.9	0.3
Westhill Road	Increased traffic flow	0.7	0.4
B4113 Stoneleigh Road in the vicinity of Stoneleigh Park and Stoneleigh	Increased traffic flow	0.7	0.3
Bericote Road	Increased traffic flow	0.7	0.3
B4115 in the vicinity of Ashow and Stoneleigh	Increased traffic flow	0.9	0.3
Dalehouse Lane	Increased traffic flow	0.7	0.3
Stoneleigh Road	Increased traffic flow	1.0	0.5
A429 Coventry/Kenilworth Road in the vicinity of Kenilworth and Coventry	Increased traffic flow	0.7	0.3
Hob Lane in the vicinity of Burton Green and Balsall Common	Increased traffic flow	0.7	0.3
Hodgetts Lane in the vicinity of Burton Green	Increased traffic flow	0.8	0.3
A429	Increased traffic flow	0.8	0.6
B4101 Waste Lane Between Cronwell Lane, Balsall Common And Spencer's Lane	Increased traffic flow	0.6	0.3
B4104 Kelsey Lane in the vicinity of Balsall Common	Increased traffic flow	0.7	0.3

⁶ Department of Transport (1988), *Calculation of Road Traffic Noise*.

Sound Source affected	Cause of change in levels	Change in sound levels (existing baseline to 2026 future baseline) (dB)	
		Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$
Stonleigh Road	Increased traffic flow	0.7	0.7
B4113 Coventry Road in the vicinity of Stoneleigh	Increased traffic flow	0.7	0.7
Crewe Lane	Increased traffic flow	0.9	0.6
Red Lane in the vicinity of Burton Green	Increased traffic flow	1.0	0.9
A46, Kenilworth By Pass	Increased traffic flow	0.7	0.7

4 References

Building Research Establishment (2002), *National Noise Incidence Study, 2000/2001*.

Defra, Noise Mapping England, <http://services.defra.gov.uk/wps/portal/noise/>; accessed 26 July 2013.

Department of Transport (1988), *Calculation of Road Traffic Noise*.